Health Alert
Carfentanil Detected in Suspected Drug Overdose Deaths in Philadelphia
July 11, 2017

The Philadelphia Department of Public Health (PDPH) is issuing this Health Alert to inform clinical providers about detection of high-potent fentanyl analogs in Philadelphia resulting in three deaths and potential risks to healthcare and public safety personnel. Toxicology reports from the Philadelphia Medical Examiner have confirmed the presence of carfentanil in one overdose death occurring in December 2016 and two in June 2017. The patients were a 59 year old African American male, a 56 year old Caucasian male, and a 35 year old Caucasian female. While all three individuals died in the City of Philadelphia, the locations of their death were not otherwise geographically clustered. Carfentanil has also been recently detected in a random selection of packets from a drug seizure. This is an extremely potent fentanyl analogue (100 times more potent than fentanyl and 10,000 times more potent than morphine) designed for use in veterinary medicine with large animals. Carfentanil has not been previously linked with any overdose deaths in Philadelphia.

Nationally, the rapid rise in fentanyl involved overdose deaths has been linked to illicitly manufactured fentanyl and fentanyl analogues, which includes carfentanil. These substances come in several forms including powder, blotter paper, tablets, patch, and spray and can be absorbed through the skin or through accidental inhalation of airborne powder. Fentanyl and its analogues are sold illegally and often mixed with heroin and/or cocaine both with and without the user’s knowledge. Individuals that have either witnessed or experienced a fentanyl related overdose describe the physical and neurologic effects as occurring more rapidly and being more severe than that of heroin.

Preventing Overdose
Prior history of non-fatal overdose is a risk factor for fatal overdoses so the period immediately following a recognized overdose is a critical time point for life saving actions. PDPH is recommending medical personnel help prevent additional overdoses by:

- Informing all patients who use drugs of increased risk of overdose due to distribution of illicit drugs containing fentanyl
- Encouraging all patients who use drugs and overdose survivors to participate in harm reduction and overdose prevention education at local harm reduction organizations such as Prevention Point Philadelphia.
- Prescribing naloxone to all patients who use drugs and overdose survivors.
- Advising individuals to avoid using drugs alone and to avoid mixing drugs (including alcohol).
- Instructing individuals to call 911 immediately in the case of a suspected overdose reminding them of the Good Samaritan Laws in place in Pennsylvania.
- Referring patients with an opioid use disorder to drug treatment programs especially medication assisted treatment programs with methadone, buprenorphine, or naltrexone.
Responding to a Suspected Overdose
Fentanyl and its analogues pose a serious risk to public safety (including police dogs), first responders, medical, and laboratory personnel. Some forms may be absorbed through the skin or accidentally inhaled. If responding to a suspected opioid overdose, PDPH recommends:

- Exercising extreme caution. Only properly trained law enforcement professionals should handle substances suspected to contain fentanyl or fentanyl analogues.
- Utilizing appropriate personal protective equipment as indicated (gloves, eye protection, facemasks).
- Understanding the signs and symptoms of exposure. Fentanyl related overdoses present similarly to other opioid overdoses, and symptoms include pinpoint pupils, respiratory depression, depressed mental status, nausea or vomiting, and cardiovascular failure. Additionally, individuals that have either witnessed or experienced a fentanyl related overdose describe additional symptoms of chest wall rigidity (“wooden chest”), immediate air loss, foaming at the mouth, blue discoloration of the lips, and seizure like activity.
- Seeking immediate medical attention. The physical and neurologic effects of fentanyl and carfentanil occur rapidly.
- Being ready to administer multiple doses of naloxone and perform rescue breathing until naloxone takes effect. Immediately administering naloxone can reverse an overdose of carfentanil, fentanyl, or other opioids although multiple doses may be required. Continue to administer a dose of naloxone every 2-3 minutes until the individual is breathing on his/her own for at least 15 minutes.
- Knowing that fentanyl and fentanyl analogues can resemble powdered cocaine and heroin. If the presence of these substances is suspected, do not take samples or otherwise disturb the substance as this can lead to accidental exposure. Instead, secure the substance and follow approved transportation procedures.

For More Information
Local fentanyl-related Health Alerts
- PADOH Advisory: Extreme Danger Posed by Carfentanil - January 17, 2017
- PDPH Update: Opioid and Benzodiazepines Prescribing Guidelines - December 2, 2016
- PDPH Advisory: Sharp Increases in Overdoses Involving Fentanyl - August 19, 2016
- View the above alerts and others on the Health Information Portal Opioid Overdoses webpage: https://hip.phila.gov/EmergentHealthTopics/Opioids

Drug treatment resources
- Behavioral Health Services Initiative (uninsured): 215-546-1200
- Community Behavioral Health (Medicaid): 888-545-2600
- Addiction Services: http://dbhids.org/addiction-services/

Harm reduction resources
- Prevention Point: https://ppponline.org/